

Claims

1. A medicament for the treatment or prevention of diseases due to infection by *Neisseria meningitidis*, characterized in that it comprises

5 glycoconjugates and/or lipooligosaccharides (LOS) included in outer membrane vesicles, blebs, lipid layers, liposomes and/or killed or commensal bacteria with cross-reactive antigens to *Neisseria meningitidis* of the serogroup A, B, C, H, I, K, L, X, Y, Z, 29E or W135, or non-capsulated meningococcal strains,

10 and/or antibodies against such glycoconjugates and/or lipooligosaccharides.

2. The medicament of claim 1, characterized in that the commensal bacteria with cross-reactive antigens to *Neisseria meningitidis* are selected from the group consisting of *Moraxella catarrhalis* and/or *Neisseria lactamica*.

15 3. The medicament of claim 1, characterized in that the glycoconjugates and/or lipooligosaccharides are chemically modified, conjugated and/or hydrolyzed, preferably by mild acid hydrolysis.

20 4. The medicament of claim 1, preferably for the treatment of acute meningitis or septicaemia, characterized in that the antibodies are monoclonal or polyclonal, and that they are obtained from commensal and/or meningococcal species from:

- virus immortalized human lymphocytes secreting the glycoconjugate neutralizing, specific or cross-reactive antibodies,
- from human lymphocytes secreting the neutralizing antibodies fused with a human hybridoma cell line,
- 25 - from immunized animals, preferably mice, rats, rabbits or pigs producing polyclonal serum against such antibodies, or
- from immunized animals, preferably mice, rats, rabbits or pigs, after fusion of the mouse lymphocytes with a human or animal hybridoma cell line.

5. The medicament of claim 1, characterized in that it is a vaccine.

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6. The medicament of claim 1, characterized in that it is provided as a nasal/oral spray, as a liquid for injection, as an orally applied capsule or tablet and/or in combination with an adjuvant.
7. The medicament of claim 1 for the treatment of acute meningitis or septicaemia, and/or passive immunisation and/or protection of close contacts and/or susceptible individuals, characterized in that the antibodies are monoclonal or polyclonal, and that they are obtained from commensal and/or meningococcal species, and/or native and/or toxin-conjugated, and/or adjuvant supplemented human blood group antigens (sialylated and non-sialylated forms of P, pK, paragloboside, II, Lewis):
 - from virus immortalized human lymphocytes secreting the glycoconjugate neutralizing, specific and/or cross-reactive antibodies
 - isolated from human serum and/or plasma, and/or human breast milk, and/or human secretions (i.e saliva),
 - from human lymphocytes secreting the neutralizing antibodies,
 - from human lymphocytes secreting the neutralizing antibodies fused with a human or animal hybridoma cell line,
 - from immunized animals, preferably mice, rats, rabbits, or pigs producing polyclonal serum against such antigens, or
 - from immunized animals, preferably mice, rats, rabbits, or pigs after fusion of the animal lymphocytes with a human or animal hybridoma cell line.
8. The medicament of any one of the claims 1 to 7, characterized in that the antibodies are of the classes IgA₁, IgA₂, IgD, IgG₁, IgG₂, IgG₃, IgG₄, IgM, and/or IgE, that are secreted and/or membrane bound to human or animal cells, and/or to artificial membranes and/or liposomes.
9. The medicament of any one of the claims 1 to 8 for passive immunisation, characterized that it is provided as a nasal, oral or mucosal spray and/or tincture, as a liquid for injection, as an orally applied capsule or tablet and/or in combination with sodium selenite and/or with an adjuvant.
10. The medicament for passive immunisation with antibodies of any one of the claims 1 to 9, characterized that it is applied in combination with or

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without sodium selenite, or that sodium selenite is used as an agent for the treatment and/or protection of meningococcal disease without the medicament of claim 4, and/or prior to the application of the medicament of claim 4, and/or parallel to the application of the medicament of claim 4, and/or after to the application of the medicament of claim 4.

11. A diagnostic to assess the susceptibility of patients for diseases due to *Neisseria meningitidis*, characterized in that it comprises glycoconjugates and/or lipooligosaccharides from commensal bacteria with cross-reactive antigens to *Neisseria meningitidis* and/or antibodies against such glycoconjugates and/or lipooligosaccharides of any of the claims 1 to 10.

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